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EXAMINER

DANIELS, ANTHONY J

ART UNIT PAPER NUMBER

2615

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,831

Applicant(s)

KNIGHTON ET AL.

Examiner

Anthony J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 60-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 and 71-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 11, "10002". Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification**2. Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

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- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements,

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compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

- 3. Claim 29 is objected to because of the following informalities: On line 1, "...apparatus of 28..." should be apparatus of **Claim 28**. Appropriate correction is required.
- 4. Claim 41 is objected to because of the following informalities: On line 2, "...defines an first acute angle..." should be defines **a first acute angle**. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4,21,22,28,29,40 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohmura et al. (US 20040130645).

As to claim 1, Ohmura et al. teaches an apparatus comprising: a grip (Fig. 27, mounting tools “231”; *{The mounting tools “231” grip the users ears in operation.}*); and a binocular digital display assembly (Figure 27, apparatus ‘200F’; eyepiece windows “203a” and “203b”; LCD units “210a” and “210b”) coupled to the grip (Figure 27; mounting tools “231” attached to apparatus ‘200F’) and rotatable about the grip between a plurality of angular positions (Figure 27; hinge (not numbered) attaching the mounting tools “231” to the apparatus “200F”; *{The operation of the hinge can be interpreted in two ways. First, the mounting tools “231” rotate about the apparatus “200F” while the apparatus “200F” is held still. Second, the apparatus “200F” rotates about the mounting tools “231” while the mounting tools “231” are held still.}*}), which can be maintained during use (*It is inherent that the apparatus can be rotated about the grip to different positions that can be used for someone with a smaller head or someone with a larger head.*).

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As to claim 2, Ohmura et al. teaches the apparatus of Claim 1 wherein the binocular display assembly comprises: a first lens (Figure 27, magnifying lens “211a”); a first display element (Figure 27, LCD unit “210a”) disposed to be a focal distance from the first lens (*It is inherent that the lens is a focal distance away from the LCD unit, otherwise due to the stationary position of the LCD and lens, this would leave the invention unfit for its purposes.*) when the display assembly is in a deployed orientation (*Examiner interprets deployed orientation as an orientation when the apparatus “200F” is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool “231”.*); a second lens (Figure 27, magnifying lens “211b”); a second display element (Figure 27, LCD unit “210b”) disposed to be a focal distance from the first lens (*It is inherent that the lens is a focal distance away from the LCD unit, otherwise due to the stationary position of the LCD and lens, this would leave the invention unfit for its purposes.*) when the display assembly is in a deployed orientation (Figure 27; *{Examiner interprets deployed orientation as an orientation when the apparatus “200F” is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool “231”.*}).

As to claim 3, Ohmura et al. teaches the apparatus of Claim 2 wherein the display elements are one of liquid crystal displays (LCD), organic light emitting diode (OLED) displays, Liquid Crystal On Silicon (LCOS) displays, electroluminescent (EL) displays, and retinal scan lasers ([0369], Lines 7-11).

As to claim 4, Ohmura et al. teaches the apparatus of Claim 1 wherein the display assembly has a stowed orientation (Figure 27; *{Examiner interprets stowed orientation as an orientation when the apparatus “200F” is at any angle between 0° and 45° with respect to the axis defined by the right or left mounting tool “231”.*}) and a deployed orientation (Figure 27;

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{Examiner interprets deployed orientation as an orientation when the apparatus "200F" is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool "231".}) and wherein when in the stowed orientation, at least 25 % of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 27; *{In stowed orientation (as interpreted by examiner), the apparatus "200F" would overlap with at least 50% of either the right or left mounting tool. The only portion that would not overlap would be the piece of the mounting tool that goes behind the ear of the user, which only accounts for at most 30% of the volume of the mounting tool.}*).

As to claim 21, Ohmura et al. teaches the apparatus of Claim 1 wherein at least a first position is suitable for right-handed use and at least a second position is suitable for left-handed use (*It is inherent in the system of Ohmura et al. that the user's right or left hand could hold either the right or left mounting tools.*).

As to claim 22, Ohmura et al. teaches the apparatus of Claim 1 wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly (Figure 27; *{Either the right or left mounting tool could pivot on the axis containing the length of the mounting tool which is perpendicular to the vertical axis that cuts through the hinge (not numbered).}*).

As to claim 28, Ohmura et al. teaches an apparatus (Figure 27) comprising: a grip (Figure 27, mounting tools "231") having a stowed orientation (Figure 27; *{Examiner interprets stowed orientation as an orientation when the mounting tools "231" are at any angle between 0° and 45° with respect to the axis containing the eyepiece windows "203a" and "203b".}*) and a deployed orientation (Figure 27; *{Examiner interprets deployed orientation as an orientation*

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when the mounting tools "231" are at any angle between 45° and 90° with respect to the containing the eyepiece windows "203a" and "203b".}); and a digital display assembly (Figure 27, apparatus "200F") having a stowed orientation (Figure 27; {Examiner interprets stowed orientation as an orientation when the apparatus "200F" is at any angle between 0° and 45° with respect to the axis defined by the right or left mounting tool "231".}) and a deployed orientation (Figure 27; {Examiner interprets deployed orientation as an orientation when the apparatus "200F" is at any angle between 45° and 90° with respect to the axis defined by the right or left mounting tool "231".}), such that, in the deployed orientation, the display is laterally displaced relative to the grip (Figure 27; {Mounting tool "231" is in deployed orientation and the apparatus "200F" (which contains the display) is laterally displaced from it.}) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.).

As to claim 29, Ohmura et al. teaches the apparatus of claim 28 wherein in the stowed orientation at least 25% of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 27; {In stowed orientation (as interpreted by examiner), the apparatus "200F" would overlap with at least 50% of either the right or left mounting tool. The only portion that would not overlap would be the piece of the mounting tool that goes behind the ear of the user, which only accounts for at most 30% of the volume of the mounting tool.}).

As to claim 40, Ohmura et al. teaches the apparatus of Claim 28 wherein in the deployed orientation, the grip may pivot to at least one self maintaining position on an axis orthogonal to an axis of rotation of the display assembly (Figure 27; {Either the right or left mounting tool

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could pivot on the axis containing the length of the mounting tool which is perpendicular to the vertical axis that cuts through the hinge (not numbered).}).

6. Claims 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Blazek et al. (US # 4,864,425).

As to claim 28, Blazek et al. teaches an apparatus (Figure 6A) comprising: a grip (Figure 6A, hand-grip "37") having a stowed orientation (Figure 6A; *{Examiner interprets stowed orientation as an orientation where the hand-grip "37" is disposed within the brackets via the loosening of Allen bolt "38" and adjusting the hand-grip "37" (Col. 6, Lines 18-31).}*) and a deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*); and a digital display assembly (Figure 6A, body containing LCD "302") having a stowed orientation (Figure 6A; *{Examiner interprets stowed orientation as when the hand-grip "37" is held still and the body containing the LCD is rotated to where the hand-grip is disposed within the brackets.}*) and a deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*), such that, in the deployed orientation (Figure 6A; *{The position seen in Figure 6A is the deployed orientation.}*), the display is laterally displaced relative to the grip (Figure 6A; *{The body containing the LCD is in deployed position and is laterally displaced from the hand-grip "37".}*) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (*It is inherent that a hand holding the grip is laterally displaced from the frontal face of a head of the user.*).

7. Claims 1,23-26,28,47-50,55-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Himmele (US 20040237176).

As to claim 1, Himmele teaches an apparatus comprising: a grip (Figure 1, strap "5"; *{The strap "5" grips the user's head in operation.}*); and a binocular digital display assembly (Figure 1, visor "1"; [0023]) coupled to the grip (Figure 1) and rotatable about the grip between a plurality of angular positions, which can be maintained during use ([0024], Lines 1-3).

As to claim 23, Himmele teaches the apparatus of Claim 1 further comprises: a visor (Figure 1, *{Examiner interprets visor as the top part of visor "1" that juts out above the lenses and the attachable piece "10".}*) coupled to the housing (Figure 1) and to rest upon a forehead of the user when held by a user for use (*It is inherent in the system of Himmele that the user's forehead will be pressed against the visor in use.*), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1), the visor pivots coupled to the display assembly to pivot between an open and a closed position ([0035]; *{The open and closed positions are interpreted as the in-use and not-in-use positions of Himmele.}*).

As to claim 24, Himmele teaches the apparatus of Claim 23 wherein pivoting the visor to the open position activates the display (*It is inherent that when the visor is pivoted to the in-use position, the display will be active.*).

As to claim 25, Himmele teaches the apparatus of Claim 23 wherein when the visor is in the closed position, the display is in an inactive state (*It is inherent that when the visor is pivoted to the not-in-use position, the display will not be able to be viewed.*).

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As to claim 26, Himmele teaches the apparatus of Claim 23 wherein the visor protects a lens of the display assembly when in the closed position ([0022], Lines 1-9).

As to claim 28, Himmele teaches an apparatus (Figure 1) comprising: a grip (Figure 1, strap '5') having a stowed orientation and a deployed orientation [0024], Lines 1,2); and a digital display assembly (Figure 1, visor "1") having a stowed orientation and a deployed orientation ([0024], Lines 2,3), such that, in the deployed orientation, the display is laterally displaced relative to the grip (Figure 1, *{The display is inside the visor, the strap is outside.}*) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (Figure 1, *{A hand that can hold the strap is lateral displaced relative to the frontal face of a head of a user.}*).

As to claim 47, Himmele teaches the apparatus of Claim 28 further comprises: a visor (Figure 1, *{Examiner interprets visor as the top part of visor "1" that juts out above the lenses and the attachable piece "10".}*) coupled to the housing (Figure 1) and to rest upon a forehead of the user when held by a user for use (*It is inherent in the system of Himmele that the user's forehead will be pressed against the visor in use.*), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1), the visor pivots coupled to the display assembly to pivot between an open and a closed position ([0035]; *{The open and closed positions are interpreted as the in-use and not-in-use positions of Himmele.}*).

As to claim 48, Himmele teaches the apparatus of Claim 47 wherein pivoting the visor to the open position activates the display (*It is inherent that when the visor is pivoted to the in-use position, the display will be active.*).

As to claim 49, Himmele teaches the apparatus of Claim 47 wherein when the visor is in the closed position, the display is in an inactive state (*It is inherent that when the visor is pivoted to the not-in-use position, the display will not be able to be viewed.*).

As to claim 50, Himmele teaches the apparatus of Claim 47 wherein the visor protects a lens of the display assembly when in the closed position ([0022], Lines 1-9).

As to claim 55, Himmele teaches a handheld apparatus (Figure 1, *{The apparatus in Figure 1 is able to be held by a hand.}*) comprising: a housing (Figure 1, visor "1") defining a first opening (Figure 1, opening on other side of the left lens "2" which the user's eyes look through); a digital display disposed within the housing ([0023], Lines 1-5); a first lens disposed to be between a first eye of a user and the display when in use ([0023]); and a visor (Figure 1, *{Examiner interprets visor as the top part of visor "1" that juts out above the lenses and the attachable piece "10".}*) coupled to the housing (Figure 1) and to rest upon a forehead of the user when held by a user for use (*It is inherent in the system of Himmele that the user's forehead will be pressed against the visor in use.*), the visor having a cross-dimension selected to maintain a predetermined focal distance between the first lens and an eye of the user (Figure 1).

As to claim 56, Himmele teaches the apparatus of Claim 55 further comprising: a second lens disposed to be between a second eye of the user and the display when in use such that a binocular view is presented to the eyes of the user ([0022], [0023]).

As to claim 57, Himmele teaches the apparatus of Claim 55 wherein the visor is pivotally coupled to the housing to pivot between an open position and a closed position ([0035]; *{The open and closed positions are interpreted as the in-use and not-in-use positions of Himmele.}*).

As to claim 58, Himmele teaches the apparatus of Claim 55 wherein the cross-dimension is adjustable within a range ([0024], Lines 2,3).

As to claim 59, Himmele teaches the apparatus of Claim 55 wherein the visor is coupled to the housing so as to block some ambient light from the eye of the user when the apparatus is in use ([0022], Lines 1-9).

8. Claims 28,31,34,35,41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Bronson (US # 6,384,863).

As to claim 28, Bronson teaches an apparatus (Figure 1A) comprising: a grip (Figure 1A, hand grip "100") having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B; *{In a frame of reference of someone who is moving up with the digital camera (Col. 3, Lines 21-26) and looking down at the hand grip, it would seem as if the hand grip is moving down to a deployed orientation.}*); and a digital display assembly having a stowed orientation (Figure 1A) and a deployed orientation (Figure 1B), such that, in the deployed orientation, the display (Col. 3, Lines 58-61, "...microdisplay viewfinder...") is laterally displaced relative to the grip (Figure 1B) such that, in use, a hand holding the grip is laterally displaced relative to a frontal face of a head of a user (Figure 1B; Col. 4, Lines 52-60).

As to claim 31, Bronson teaches the apparatus of Claim 28 further comprising: a sensor to detect relative rotation of the display assembly (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to*

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either the portrait or landscape position depending on the current position.}) and to signal the display to adjust an image on the display to maintain a consistent orientation of an image displayed (The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.).

As to claim 34, Bronson teaches the apparatus of Claim 28 further comprising: a lens assembly coupled to the grip (Figure 1A, lens “120”); and an image-sensing array (ISA) optically coupled to the lens assembly (Col. 3, Lines 62-65, “...image array...”; *{It is inherent that the image array is optically coupled to the lens “120”.}*).

As to claim 35, Bronson teaches the apparatus of Claim 34 further comprising: a sensor to detect a position of the display assembly relative to the ISA (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}*) and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display (*The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.*).

As to claim 41, Bronson teaches the apparatus of Claim 31 wherein in the deployed orientation, the grip defines a first acute angle away from a body of an operator to permit comfort and reduce stress on the hand and arm (*It is inherent that the body of an operator could be at a position to where, measured from the body of the operator, the grip is an acute angle away.*).

As to claim 42, Bronson teaches the apparatus of Claim 41 wherein any actuation of the trigger causes a capture (Col. 2, Lines 18,19, "...shutter trigger...").

As to claim 43, Bronson teaches the apparatus of Claim 28 wherein the pointer button (Col. 3, Lines 55-58, "...select button...") resides within a region (Figure 1A, hand grip "100" is the region) and wherein a position of the pointer button within the region is absolutely mapped to the display (*The depressing of select button (position) provides an instruction on the microdisplay viewfinder to the camera.*).

As to claim 44, Bronson teaches the apparatus of Claim 28 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (Col. 3, Lines 55-58).

9. Claims 52,53 are rejected under 35 U.S.C. 102(e) as being anticipated by Kubo et al. (US 20010004268).

As to claim 52, Kubo et al. teaches a camera (Figure 4, camera "1") comprising: an image-sensing array (ISA) (Figure 6, image pickup sensor "321"); a lens assembly (Figure 6, lens unit "31"); and a plurality of memory card slots (Figure 5, card slots "41a" and "41b") to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8).

As to claim 53, Kubo et al. teaches the camera of claim 52 wherein at least two of the memory card slots accept a same media type (Figure 13; [0087], Lines 1-8; *{The cards both contain images.}*).

10. Claim 54 is rejected under 35 U.S.C. 102(e) as being anticipated by Havey et al. (US # 6,597,346).

As to claim 54, Havey et al. teaches an apparatus (Figure 8) comprising: a binocular display assembly (Figure 8; Col. 8, Lines 25-44); an execute input interface (Col. 7, Lines 31-39); and a pointer interface (Figure 1, user input device "30") providing absolute mapping between a pointer button and a display of the display assembly (Col. 7, Lines 31-39) wherein substantially all functions of the apparatus can be accessed using only the pointer interface and the execute input interface (Col. 5, Lines 17-20).

11. Claims 71-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Shibata et al. (US # 6,249,309).

As to claim 71, Shibata et al. teaches an apparatus (Figure 15) comprising: a camera (Figure 15; Col. 14, Lines 45-56; *{Examiner refers to camera as the camera and monitor "2102"}*); a display integrated into the camera (Col. 14, Lines 45-56), the display having a first region to display first image at a full display resolution (Figure 4a, received still picture); and a second region to simultaneously display a second image at substantially reduced resolution (Figure 4a, received motion picture).

As to claim 72, Shibata et al. teaches the apparatus of Claim 71 wherein the second region is an inset within the first region (Figure 4a).

As to claim 73, Shibata et al. teaches the apparatus of Claim 71 wherein the first image and the second image may be toggled between a current view of the camera and a previously

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captured image (Figure 4a and Figure 4b; *{Examiner refers to current view of the camera as the received still picture, and the previously captured image as the received motion picture.}*).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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12. Claim 1,4,7,8,10-15,17,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (US # 5,581,399) in view of Bronson (US # 6,384,863).

As to claim 1, Abe teaches an apparatus (Figure 1) comprising: a grip (Figure 1, left and right sides of the binocular display); and a binocular digital display assembly (Figure 1, LCDs “34L” and “34R”) coupled to a grip (Figure 1). The claim differs from Abe in that it requires the digital display assembly is rotatable about a grip between a plurality of angular positions, which can be maintained during use.

In the same field of endeavor, Bronson teaches a digital display assembly (Figure 1A, lens assembly “200”) that is rotatable about a grip (Figure 1A, hand grip “100”; Col. 3, Lines 27-35). In light of the teaching of Bronson, it would have been obvious to one ordinary skill in the art to include the display assembly of Abe on the telescoping device “160” and connected to the grip “100” of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the user to elevate the binocular display to eye level, be able to rotate the assembly to any direction the user desires while keeping the hand at a comfortable, natural position (see Bronson, Col. 3, Lines 21-40).

As to claim 4, Abe, as modified by Bronson, teaches the apparatus of Claim 1 wherein the display assembly has a stowed orientation and a deployed orientation (see Bronson, Figure 1A and Figure 1B), and wherein when in the stowed orientation, at least 25% of a deployed volume of the display assembly overlaps with a volume of the grip (Figure 1A).

As to claim 7, Abe, as modified by Bronson, teaches the apparatus of Claim 1 further comprising: a lens assembly (see Abe, Figure 1, lenses “31R”, “31L”; “32L”, “32R”) coupled to the grip (Figure 1, the lenses are coupled to the binocular display assembly which is coupled to

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the hand grip “100” of Bronson); and an image-sensing array (ISA) optically coupled to the lens assembly (see Abe, Figure 1, image sensors “41R” and “41L”).

As to claim 8, Abe, as modified by Bronson, teaches the apparatus of Claim 7. The claim differs from Abe in that it further comprises a sensor to detect a position of the display assembly relative to the ISA and cause an adjustment to an image displayed on the display assembly based on the position to maintain a consistent orientation of a target on the display.

In the same field of endeavor, Bronson teaches a sensor to detect relative rotation of the display assembly (Col. 3, Lines 62-65; *{The processor, inherent in the digital camera, acts as a sensor, in that, when the button is depressed to initiate array rotation, the processor senses, by an inherent means of software or hardware, whether the camera is in portrait or landscape position in order to effectively position the array back to either the portrait or landscape position depending on the current position.}*) and to signal the display to adjust an image on the display to maintain a consistent orientation of an image displayed (*The consistent orientation of the image is having the entire subject captured using the portrait or landscape position.*). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include the sensor of Bronson in the processor of Abe, because an artisan of ordinary skill in the art would recognize that this would allow the user to capture very long or very tall images in one shot.

As to claim 10, Abe teaches the apparatus of Claim 7. The claim differs from Abe in that it requires that the binocular display assembly comprises a photographic light source.

In the same field of endeavor, Bronson teaches a photographic fill-in flash on its display assembly (Figure 1, fill-in flash “150”). In light of the teaching of Bronson, it would have been obvious to one of ordinary skill in the art to include a light source in the binocular display

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assembly of Abe, as modified by Bronson, because this would allow the image captured to be more illuminated.

As to claim 11, Abe teaches the apparatus of Claim 7 wherein the binocular display assembly comprises: a photographic light source (Figure 1, fill-in flash “150”) positioned sufficiently far from the lens assembly to reduce illumination errors (*It is inherent that the fill-in flash of Bronson is of sufficient space to avoid errors and when combined with Abe, this same distance would apply.*).

As to claim 12, Abe teaches the apparatus of Claim 7 further comprising: a trigger to cause a capture by the ISA (see Bronson, Figure 1, trigger button “110”), the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip (see Bronson, Col. 2, Lines 18-21).

As to claim 13, Abe, as modified by Bronson, teaches the apparatus of Claim 12 wherein any actuation of the trigger causes a capture (see Bronson, Col. 2, Lines 18,19).

As to claim 14, Abe teaches the apparatus of Claim 1 further comprising: a pointer button coupled to the grip to provide an interface for user manipulation of a pointer within the display (see Bronson, Col. 3, Lines 55-61, “...select button...”).

As to claim 15, Abe, as modified by Bronson, teaches the apparatus of claim 14 wherein the pointer button is disposed to allow actuation by the thumb of a hand holding the grip (see Bronson, Col. 3, Lines 47-49).

As to claim 17, Abe, as modified by Bronson, teaches the apparatus of Claim 14 wherein the pointer button (see Bronson, Col. 3, Lines 55-58, “...select button...”) resides within a region (see Bronson, Figure 1A, hand grip “100” is the region) and wherein a position of the pointer

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button within the region is absolutely mapped to the display (*The depressing of select button (position) provides an instruction on the microdisplay viewfinder to the camera.*).

As to claim 18, Abe, as modified by Bronson, teaches the apparatus of Claim 1 wherein the trigger and the pointer button provide access to substantially all user controls without the need for other buttons (see Bronson, Col. 3, Lines 55-58).

13. Claims 5,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) and further in view of Kawamura et al. (US # 4,326,783).

As to claim 5, Abe, as modified by Bronson, teaches the apparatus of Claim 4. The claim differs from Abe, as modified by Bronson, in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Abe, as modified by Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

As to claim 6, Abe, as modified by Bronson, teaches the apparatus of Claim 4. The claim differs from Abe, as modified by Bronson in that it further requires a self- powered expander

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which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Abe, as modified by Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

14. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (see Patent Number above).

As to claim 9, Ohmura et al. teaches the apparatus of Claim 1. The claim differs from the embodiment of Ohmura et al. in Figure 27 in that it further requires a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna "325"; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. (Figure 43) in the system of Ohmura et al. (Figure 27), because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

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15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) in view of Blazek et al. (see Patent Number above).

As to claim 16, Abe, as modified by Bronson teaches the apparatus of Claim 1. The claim differs from Abe, as modified by Bronson, in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; *{When the grip "37" is adjusted to be covered by the shoulder rest "27" and brackets (not shown), the buttons seen on the grip (Figure 6) are not accessible.}*). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the binocular display assembly of Abe where the control buttons "210" of Bronson are only accessible when the grip is in a deployed orientation, because an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

16. Claims 19,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmura et al. (see Patent Number above) in view of Kubo et al. (see Patent Number above).

As to claim 19, Ohmura et al. teaches the apparatus of Claim 1. The claim differs from Ohmura et al. in that it further requires a plurality of memory card slots.

In the same field of endeavor, Kubo et al. teaches a digital camera with a plurality of memory card slots that accepts memory cards (Figure 4, slots "41a" and "41b"; [0043]). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to

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include another memory card slot in the system of Ohmura et al. (Figure 27), because an artisan of ordinary skill would recognize that items in the memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

As to claim **45**, the limitations in claim 45 can be found in claim 19. Therefore, claim 45 is analyzed and rejected as previously discussed with respect to claim 19.

17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (see Patent Number above) in view of Bronson (see Patent Number above) and further in view of Kubo et al. (see Patent Number above).

As to claim **20**, Abe, as modified by Bronson, teaches the apparatus of Claim 7. The claim differs from Abe, as modified by Bronson, in that further it further requires a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots "41a" and "41b") to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include a plurality of memory card slots in the recording/playback devices "14L" and "14R" of Abe, as modified by Bronson, because an artisan of ordinary skill would recognize that

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items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

18. Claim 27,51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Himmele (see Patent Number above).

As to claim 27, Himmele teaches the apparatus of Claim 24, wherein cycling the visor activates the display ([0035]). Although Himmele does not specifically teach a timer that times out after a predetermined time during which no display event occurred, the time out causing the display to deactivate. **Official Notice** is taken that the concept of timer, when timed out, that deactivates a display when no event has occurred is well known and expected in the art. One of ordinary skill in the art would have motivated to do such, because this is an effective to save power of the apparatus that comprises the display.

As to claim 51, the limitations in claim 51 can be found in claim 27. Therefore, claim 27 is analyzed and rejected as previously discussed with respect to claim 27.

19. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Blazek et al. (see Patent Number above).

As to claim 30, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it requires that the pointer button is only accessible when the grip is in a deployed orientation.

In the same field of endeavor, Blazek et al. teaches an apparatus (Figure 6) in which the pointer button is only accessible when the grip is in a deployed position (Figure 6; *{When the grip "37" is adjusted to be covered by the shoulder rest "27", the buttons seen on the grip (Figure 6) are not accessible.}*). In light of the teaching of Blazek et al., it would have been obvious to one of ordinary skill in the art to position the lens assembly of Bronson "200" where the control buttons "210" are only accessible when the grip is in a deployed orientation, because an artisan of ordinary skill in the art would recognize that this would prevent accidental capture initiation when the user does not intend it.

20. Claims 32,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Kawamura et al. (US # 4,326,783).

As to claim 32, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered expander which when actuated expands the display assembly from its stowed volume to its deployed volume.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

As to claim 33, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a self- powered positioner which when actuated transitions the display assembly from its stowed orientation to its deployed orientation.

In the same field of endeavor, Kawamura et al. teaches a motor for expanding a lens into a deployed orientation (Col. 8, Lines 39-45). In light of the teaching of Kawamura et al., it would have been obvious to one of ordinary skill in the art to include a self-powered expander for the display assembly of Bronson, because an artisan of ordinary skill in the art would recognize that this would allow the system to be more automated without the use of manual adjustment.

21. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above).

As to claim 36, Bronson teaches the apparatus of Claim 28. The claim differs from Bronson in that it further requires a distributed network interface coupled to the display assembly.

In the same field of endeavor, Ohmura et al. teaches a camera that comprises an antenna for transmitting and receiving images (Figure 43, antenna “325”; [0408]). In light of the teaching of Ohmura et al., it would have been obvious to one of ordinary skill in the art to include the antenna of Ohmura et al. in the display assembly of Bronson “200”, because an artisan of ordinary skill in the art would recognize that this would allow for the transfer of digital images among cameras without the need for a cable that prevents portability.

As to claim 37, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash “150”).

As to claim 38, Bronson teaches the apparatus of Claim 36 further comprising: a photographic light source (see Bronson, Figure 1A, fill-in flash “150”) positioned sufficiently far from the lens assembly to reduce illumination errors (see Bronson, Figure 1A).

As to claim 39, Bronson teaches the apparatus of Claim 36 further comprising: a trigger to cause a capture by the ISA (see Bronson, Col. 2, Lines 18,19), the trigger disposed on the grip to allow actuation by an index finger of a hand holding the grip (see Bronson, Col. 2, Lines 20,21).

22. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (see Patent Number above) in view of Ohmura et al. (see Patent Number above) in view of Kubo et al. (see Patent Number above).

As to claim 46, Bronson, as modified by Ohmura et al., teaches the apparatus of claim 36. The claim differs from Bronson, as modified by Ohmura et al., in that it further requires a plurality of memory card interfaces to permit a plurality of memory cards to be concurrently attached and electronically selected by the apparatus.

In the same field of endeavor, Kubo et al. teaches a plurality of memory card slots (Figure 5, card slots "41a" and "41b") to which a plurality of memory card devices can be concurrently attached ([0043]) and selected electronically ([0074], Lines 1-5; [0087], Lines 1-8). In light of the teaching of Kubo et al., it would have been obvious to one of ordinary skill in the art to include a plurality of memory card slots in the recording/playback devices "14L" and "14R" of Bronson, as modified by Ohmura et al., because an artisan of ordinary skill would recognize that items in the multiple memory cards in the slots are handled as if they were multiple items of image data recorded in a single large capacity memory card. Consequently erroneous operation in image reproduction may be prevented. In addition image searches may be efficiently performed through a smaller number of steps (see Kubo et al., [0081]).

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (571) 272-7362. The examiner can normally be reached on 8:00 A.M. - 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD
5/20/2005



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PRIMARY EXAMINER